

**REPORT TO THE TWENTY- FOURTH LEGISLATURE
STATE OF HAWAII
2008**

SOLID WASTE MANAGEMENT

**PURSUANT TO SECTION 342G-15, HAWAII REVISED STATUTES
REQUIRING THE OFFICE OF SOLID WASTE MANAGEMENT TO GIVE AN
ANNUAL REPORT ON SOLID WASTE MANAGEMENT**

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EXECUTIVE SUMMARY

In 2006 statewide generation of municipal solid waste (MSW) totaled 2,568,134 tons, or approximately 9.3 pounds of waste per person per day. This compares to rate of 4.6 pounds per person per day, as calculated by the Environmental Protection Agency (EPA). Nearly one-third of Hawaii's generated waste was recycled, with the remaining amount being landfilled or incinerated.

The State's solid waste diversion rate for FY2006-07 is 31.4%, and is based mostly on the amount of recycling plus some reuse. According to the EPA, the national recycling rate for 2006 was 32.5%. The state's goal was 50% waste diversion by 2000, based on HRS 342G-3(a)(2), which was adopted in 1991. The EPA revised its recycling goal of 50% by 2000 to 35% by 2005.

I. INTRODUCTION

The Office of Solid Waste Management (OSWM) is required to provide an annual report to the legislature to describe the State's progress toward achieving the waste reduction goal. The report also contains general program information about OSWM programs and the counties' solid waste and recycling efforts.

This report covers activities of both the OSWM and the Solid Waste Section (SWS) conducted during the 2006-07 fiscal year. Both programs are contained within the Department of Health's Solid and Hazardous Waste Branch. The SWS is the program responsible for permitting and monitoring solid waste facilities within the state, while planning functions are contained within the OSWM. The OSWM also administers the state Deposit Beverage Container (DBC) Program. The Office of Solid Waste Management (OSWM) of the SHWB provides technical and programmatic assistance to the counties in their development of solid waste management and recycling programs. The activities of the DBC program are covered in a separate report.

In 1991, the legislature established a waste stream reduction goal of 50% by the year 2000. The OSWM works to enhance the development of county and private recycling programs through a combination of statewide funding mechanisms and statewide guidance and mandates.

II. SOLID WASTE MANAGEMENT

Solid Waste Priorities and Practices

Hawaii Revised Statutes section 342G-2 requires the department and the counties to consider solid waste management practices and methods in the following order of priority:

- 1) Source Reduction
- 2) Recycling (to include composting)
- 3) Landfilling and incineration

The first two practices reduce the amount of waste to be either landfilled or incinerated.

As to practices, source reduction, also called "waste prevention" or "waste reduction", means creating less waste. "Reuse", although not included in the list of priorities, means using a product over without first having to reprocess it. The product may be used for its original or intended use, or may be used in a different capacity. "Recycling" is the process by which materials are collected and used as "raw" materials to create new products. Collectively, these methods are sometimes referred to as "waste diversion".

Because waste reduction avoids creation of waste it is inherently difficult to quantify. In some cases, comparisons can be made to waste levels before a waste reduction practice was employed to waste levels afterward. In other cases, an estimate of the amount of waste reduced is all that is possible.

Reuse of products or materials is marginally easier to measure than waste reduction. Because it involves actual material, it is possible to quantify reuse. Quantification can be made in numerous ways including counting number of individual product units or measuring its tonnage. However, effectively measuring reuse is still difficult because it takes place at so many levels and on a widespread scale. For example, many people regularly reuse plastic containers for

food storage at home or in the workplace. While this particular activity contributes to overall waste reduction, it is impossible to accurately measure. However, some reuse activity is accounted for in the diversion statistics presented in this report. An example of a reuse activity that is quantified is the amount of material that is donated and sold to non-profit organizations such as the Salvation Army or Goodwill Industries.

Recycling is the most easily quantified activity of the waste diversion trio for at least two reasons. First, like reuse, it involves actual material that can be measured. Second, many recycling facilities regularly submit data to the counties for tracking. In addition to that, most recycling facilities are regulated by the Department of Health under solid waste management regulations. This means that recycling statistics are readily available.

Diversion refers to the combination of reuse and recycling activities. It does not include landfilling, incineration, or waste to energy processes. The diversion rates presented below are mainly based on data collected by the counties with some Department of Health supplementation. The current diversion rate is composed primarily of recycling activity and a small amount of reuse activity.

The State's current diversion rate of 36% is in line with the most recent national statistics. The Environmental Protection Agency's (EPA) data indicates a national recycling rate of 32.1% in 2005. The state's goal of 50% waste diversion was set in 1991 and mirrored the EPA's recycling goal at the time. The EPA has since revised its recycling goal of 50% recycling by the year 2000 to 35% by 2005. This change was made in recognition of the fact that states and municipalities needed a broader time frame in which to reach higher waste reduction levels.

Hawaii's commercial recyclers continue to deal with long standing issues. Most notable is the high cost of shipping to the Far East or the mainland U.S. where most recycling markets are located. Volatility in recycled materials markets, combined with the relatively small amounts of materials generated in Hawaii also continues to challenge recyclers.

Solid Waste Disposal and Diversion Rates

The OSWM reports disposal and diversion rates by aggregating county collected data with data collected under authority of the solid waste program's permitting system. The state's fiscal year begins July and ends on June 30.

Waste Diversion Statistics for FY 2006-07

| | Disposal (Tons) | Diversion (Tons) | Generation (Tons) | Diversion Rate |
|--------|----------------------------|-----------------------------|------------------------------|---------------------------|
| Hawaii | 221,567 | 69,096 | 290,663 | 23.8% |
| Maui | 200,344 | 157,983 | 358,327 | 44.1% |
| Oahu* | 1,221,864 | 542,747 | 1,764,611 | 30.8% |
| Kauai | 90,114 | 22,419 | 112,533 | 19.9% |
| State | 1,733,889 | 834,873 | 2,526,134 | 31.4% |

Notes:

Data are county derived

* Calendar Year 2006 data

III. OFFICE OF SOLID WASTE MANAGEMENT ACTIVITIES

Beverage Container Deposit Program

A full report on DBC program activities is being submitted to the legislature separately.

Glass Advance Disposal Fee (ADF) Program

The OSWM continues to administer a statewide glass recovery program that is funded through an advance disposal fee (ADF). The department collects the fee from distributors of products contained in glass containers that are not deposit beverage containers. The department then contracts with each county to establish glass buy back programs that divert glass from the waste stream towards recycling. As directed by statute, HRS 342G-84, the funds are distributed to the counties based on de facto population. Each county is allowed enough flexibility to structure its glass-recycling program to maximize recycling of the glass.

The Glass ADF Program has been significantly affected by implementation of the Beverage Container Deposit Program. Beginning October 1, 2004, glass deposit beverage containers were transferred from the purview of the ADF program to that of the Deposit Beverage Container (DBC) Program. This has reduced the number of containers covered by the ADF Program by approximately 80% and brought with it a corresponding decrease in revenue. The decreased revenue trend has stabilized, which indicates that the transition of glass containers from the ADF program to the DBC program is complete.

The decrease of containers covered by the ADF program is also reflected in the decreased amount of glass collected through each county operated buy back program. The department has reduced the amounts of each of the county contracts in accordance with the decrease in program revenue.

County Recycled Glass Tonnages

| FY | 03 | 04 | 05 | 06 | 07 |
|--------|--------|--------|--------|-------|-------|
| Hawaii | 1,585 | 1,486 | 1,289 | 582 | 401 |
| Maui | 3,078 | 3,382 | 2,263 | 2,040 | 620 |
| Oahu | 9,514 | 9,575 | 7,796 | 632 | 1,171 |
| Kauai | 645 | 795 | 754 | 0 | 221 |
| Total | 14,822 | 15,238 | 12,100 | 3,254 | 2,413 |

Revenue and Expenditures of the Glass ADF Program:

Glass ADF Revenue

| FY | 03 | 04 | 05 | 06 | 07 |
|----|-------------|-------------|-------------|-----------|-----------|
| | \$3,076,701 | \$3,381,455 | \$1,500,015 | \$651,746 | \$676,011 |

Expenditures for County Collection Programs

| FY | 03 | 04 | 05 | 06 | 07 |
|--------------|--------------------|--------------------|--------------------|------------------|------------------|
| Hawaii | \$283,000 | \$298,000 | \$298,000 | \$71,000 | \$56,879 |
| Maui | \$285,000 | \$300,000 | \$300,000 | \$225,000 | \$57,261 |
| Oahu | \$1,570,000 | \$1,647,000 | \$1,647,000 | \$215,000 | \$314,363 |
| Kauai | \$127,000 | \$134,000 | \$134,000 | \$10,000 | \$25,577 |
| Total | \$2,265,000 | \$2,379,000 | \$2,379,000 | \$521,000 | \$454,080 |

Motor Vehicle Tire Surcharge Program

Established under HRS Ch. 342I-27 in 2000, the Motor Vehicle Tire Surcharge Program assessed a \$1 surcharge on each motor vehicle tire imported into the state. The program's primary purpose is the clean up of illegal used tire dump sites.

The surcharge took effect on October 1, 2000. In 2002 the legislature, through Act 191, capped the surcharge collections at \$3,000,000. Act 191 also required the Department to waive collection of the \$1 surcharge whenever the funds collected exceeded the \$2,750,000 mark. This mark was reached on June 30, 2003 and collection of the surcharge was subsequently discontinued.

Construction & Demolition Waste Minimization and Diversion Outreach

The OSWM continues to provide compliance assistance to Hawaii's construction industry, which is comprised of general contractors, subcontractors, builders, developers and other interested parties. The purpose is to promote compliance with State illegal dumping laws established in Chapters 342G and 342H, HRS, and Chapter 11-58.1, HAR, "Solid Waste Control". The OSWM participates in workshops convened by the department's Compliance Assistance Office and also attends General Contractor's Association of Hawaii meetings. It also participates in special meetings coordinated by the Buildings Industry Association and other agencies of the State, such as DAGS and the Strategic Industries Division of DBEDT.

County Solid Waste Management Planning Activity

Statute requires that each county develop and maintain an integrated solid waste management (ISWM) plan. The counties of Kauai, Maui and the City and County of Honolulu each began the process of revising its existing ISWM plan during the 2006-07 fiscal year.

Per statutory requirements, each county assembled an advisory committee as part of its revision process. An OSWM staff member participated in the advisory committee phase of the process as either members of the committee or as resources that committee members could call on for information or guidance.

The County of Kauai concluded its advisory committee meetings in late 2006 and has recently submitted its draft plan for OSWM review. The City and County of Honolulu and the County of Maui were in the midst of their advisory committee meetings at the start of the 2007-08 fiscal year and are expected to submit draft plans for review sometime during calendar year 2008.

IV. SOLID WASTE MANAGEMENT PROGRAM FUNDING

Solid Waste Management Disposal Surcharge

The department collects the Solid Waste Management Disposal Surcharge from owners/operators of disposal facilities within the state. This includes all municipal solid waste and construction and demolition landfills, as well as the H-Power waste-to-energy incinerator on Oahu. Surcharge revenue is deposited in the Environmental Management Special Fund.

The disposal surcharge is the primary funding source for the department's Solid Waste Section (SWS) and two positions in the Office of Solid Waste Management (OSWM). Two further positions in the OSWM, the Solid Waste Coordinator and the Recycling coordinator, are partially funded by the surcharge. The surcharge was initially set by statute (HRS 342G-62) at 25¢ per ton in 1993 and was raised to 35¢ per ton in 1997. As indicated in the table below, surcharge revenue has been relatively stable for the past several years at approximately \$500,000 a year.

Solid Waste Disposal Surcharge Revenue

| FY | 03 | 04 | 05 | 06 | 07 |
|-----------|-----------|-----------|-----------|-----------|-----------|
| | \$511,870 | \$507,255 | \$490,850 | \$535,391 | \$565,122 |

The OSWM also contains the state's Deposit Beverage Container (DBC) Program. The DBC program staff and activities operate on a revenue stream that is separate from the SWS and the rest of the OSWM. Those funds are contained in the Deposit Beverage Container Special Fund.

Increasing Costs

The SWS staff of four engineers and four environmental health specialists handle approximately 300 permitted facilities; 100 to 200 permit applications; 200 to 300 solid waste complaints; illegal dumping sites; and numerous miscellaneous inquiries annually.

V. Summary

The statewide recycling rate has steadily increased over the past several years and has reached 30%.

Long standing challenges to further increasing the diversion rate remain; namely Hawaii's small market for generating recyclable material, and the high cost of shipping that material to markets.

The OSWM is actively participating in, and partially funding, county solid waste planning efforts.